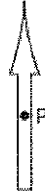


- 1 If the letter **P** is rotated 180 degrees, which is the resulting figure?

- 1) **p**
- 2) **p**
- 3) **p**
- 4) **b**

Draw pictures/  
Show work!

- 2 The accompanying diagram shows the starting position of the spinner on a board game.



How does this spinner appear after a  $270^\circ$  counterclockwise rotation about point  $P$ ?

- 1)
- 2)
- 3)
- 4)

- 3 If point  $(5, 2)$  is rotated counterclockwise  $90^\circ$  about the origin, its image will be point

- 1)  $(2, 5)$
- 2)  $(2, -5)$
- 3)  $(-2, 5)$
- 4)  $(-5, -2)$

- 4 What are the coordinates of  $M'$ , the image of  $M(2, 4)$ , after a counterclockwise rotation of  $90^\circ$  about the origin?

- 1)  $(-2, 4)$
- 2)  $(-2, -4)$
- 3)  $(-4, 2)$
- 4)  $(-4, -2)$

- 5 What is the image of point  $(8, -4)$  under the rotation  $R_{90^\circ}$  about the origin?

- 1)  $(8, 4)$
- 2)  $(4, 8)$
- 3)  $(-4, 8)$
- 4)  $(-4, -8)$

- 6 The transformation  $R_{90^\circ}$  maps point  $(5, 3)$  onto the point whose coordinates are

- 1)  $(5, -3)$
- 2)  $(3, -5)$
- 3)  $(3, 5)$
- 4)  $(-3, 5)$

- 7 What is the image of  $A(5, 2)$  under  $R_{90^\circ}$ ?

- 1)  $(-5, 2)$
- 2)  $(5, -2)$
- 3)  $(2, 5)$
- 4)  $(-2, 5)$